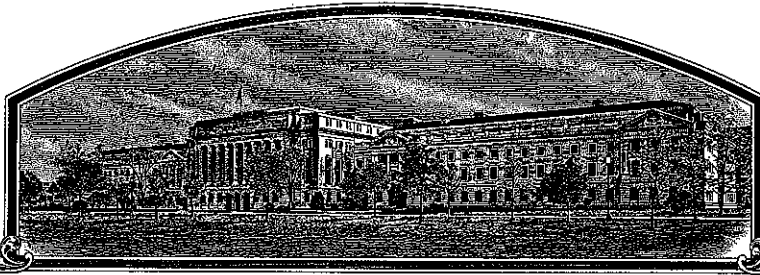


No.

200500262



# THE UNITED STATES OF AMERICA

**TO ALL TO WHOM THESE PRESENTS SHALL COME:**

**Enza Zaden Beheer B.V.**

**Whereas**, THERE HAS BEEN PRESENTED TO THE

**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

**LETTUCE**

**'Bergam's Green'**

*In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this fifth day of February, in the year two thousand and eight.*

*Attest:*

*Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service*

*Secretary of Agriculture*

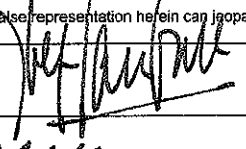
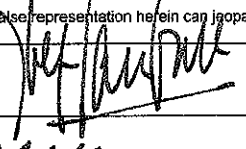
*Edward T. Schroeder*

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE  
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER  <b>ENZA ZADEN BEHEER B.V.</b>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME  <b>15. 2131</b>		3. VARIETY NAME  <b>BERGAM'S GREEN</b>	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)  <b>POSTBUS 7, 1600 AA ENKHUIZEN HALING 1<sup>e</sup>, 1602 DB ENKHUIZEN THE NETHERLANDS</b>		5. TELEPHONE (include area code)  <b>011.31.228.315844</b>		<div style="border: 1px solid black; padding: 5px;"> <b>FOR OFFICIAL USE ONLY</b>            PVPO NUMBER  <div style="font-size: 1.5em; font-weight: bold;">200500262</div>            FILING DATE  <div style="font-size: 1.5em; font-weight: bold;">May 24, 2005</div> </div>	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.)  <b>CORPORATION</b>		8. IF INCORPORATED, GIVE STATE OF INCORPORATION  <b>NOORD-HOLLAND</b>			
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers)  <b>ENZA ZADEN RESEARCH USA, INC. ATTN: MEL HOLLAND P.O. BOX 866 SAN JUAN BAUTISTA, CA 95045</b>		11. TELEPHONE (include area code)  <b>831-623.4644</b>		<div style="border: 1px solid black; padding: 5px;"> <b>FILING AND EXAMINATION FEES:</b>            \$ <b>3652.00</b>            DATE <b>5/24/2005</b>  <b>CERTIFICATION FEE:</b>            \$ <b>768.00</b>            DATE <b>10/24/07</b> </div>	
12. FAX (include area code)  <b>831-623.1746</b>		13. E-MAIL  <b>mhollan2@ix.netcom.com</b>			
14. CROP KIND (Common Name)  <b>LETTUCE (GREEN LEAF)</b>		16. FAMILY NAME (Botanical)  <b>COMPOSITAE</b>		18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL)  <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP  <b>LACTUCA SATIVA L.</b>		17. IS THE VARIETY A FIRST GENERATION HYBRID?  <input type="checkbox"/> YES <input type="checkbox"/> NO			
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act)  <input type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input checked="" type="checkbox"/> NO (If "no", go to item 23)		21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?  <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?  <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?  <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.  <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)			
24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)?  <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)		25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.  The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF OWNER  		SIGNATURE OF OWNER  			
NAME (Please print or type)  <b>J. LAMBALK</b>		NAME (Please print or type)  <b>J. LAMBALK</b>			
CAPACITY OR TITLE  <b>DIRECTOR</b>		DATE  <b>05/23/2005</b>		CAPACITY OR TITLE  DATE	

(See reverse for instructions and information collection burden statement)

## INSTRUCTIONS

**GENERAL:** To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

**Plant Variety Protection Office**

**Telephone: (301) 504-5518**

**FAX: (301) 504-5291**

**Homepage:** <http://www.ams.usda.gov/science/pvpo/pvpindex.htm>

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that name has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 <http://www.ams.usda.gov/lsg/seed.htm>.

## ITEM

- 19a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;  
(2) the details of subsequent stages of selection and multiplication;  
(3) evidence of uniformity and stability; and  
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:  
(1) identify these varieties and state all differences objectively;  
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and  
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

**22. CONTINUED FROM FRONT** (Please provide a statement as to the limitation and sequence of generations that may be certified.)

**23. CONTINUED FROM FRONT** (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

*FIRST SALE DATE : 5/28/2004*

**24. CONTINUED FROM FRONT** (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

*USA, PVP # 92 00270, DATE FILED 09/22/1992, DATE ISSUED 04/30/1993*

*USA, PVP # 9900348, DATE FILED 06/23/1999, APPLICATION PENDING.*

**NOTES:** It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotope, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

Exhibit A – 'Bergam's Green'Origin and Breeding History

'Bergam's Green' originated from a cross between two Green Leaf cultivars 'Two Star' and 'North Star'. 'Two Star' is larger in size than 'North Star' and has less leaf blister and smoother leaf margins but it is lighter green in color and susceptible to corky root, *Sphingomonas (Rhizomonas) suberifaciens*. 'North Star' has a more frilly leaf margin and blistered leaf and is resistant to corky root, 'North Star' is slower bolting and more prone to producing suckers (side shoots) at the base of the plant in cooler weather. The pedigree method of plant breeding and mass selection was employed in developing the variety 'Bergam's Green'. Screening for corky root resistance was utilized in combination with the selection process.

The selection criteria, disease screening (see tables Exhibit D-1) and seed multiplication involved in the development of 'Bergam's Green' are as follows:

1. The cross was made in October 1999 using a corky root susceptible variety, 'Two Star' as the female parent and 'North Star' a corky root resistant variety as the male parent.
2. Seed of the F-1 was sown in the greenhouse on December 1, 1999. Two single plant selections (#1917A, B-GH'00) and a two plant mass (#1917ms-GH'00) were made from the December 1, 1999 sowing.
3. Seed from the F-2, GH-00-1917A was sown at the company trial grounds in San Juan Bautista, California on August 15, 2000 (11-00-5942). Five single plant selections were made on October 16, 2000 and transplanted to the greenhouse for seed increase.
4. F-3 seed was sown March 19, 2001 in a greenhouse screening for resistance to corky root. After seedlings had emerged they were placed on a temperature controlled bench with soil temperature maintained at 28C. Seedlings were evaluated for corky root symptoms on April 3, 2001. Two of the F-3 selections (CRR2-01-1114, 1116) were homozygous resistant to corky root. One single plant selection and a three plant mass were saved for seed increase from CRR2-01-1114.
5. F-3 seed of the two resistant selections was sown also in flats on April 12, 2001. The seedlings were then transplanted to company trial grounds May 9, 2001. Four single plant selections were made on June 20, 2001 from 4-01-2692 and transplanted to the greenhouse for seed increase.
6. F-4 seed was sown at the company trial grounds April 24, 2002. Six single plant selections were made on July 3, 2002 from 4-02-2953 and transplanted to the greenhouse for seed increase.
7. F-5 seed was sown for evaluation at the company trial grounds in San Juan Bautista, CA. Based on performance in the breeding nurseries the F-5 selection from 4-02-2953A was chosen for seed increase and given the experimental number 15.2131.

8. 1200 seed of experimental 15.2131 was sown April 25, 2003 in flats for stock seed increase and commercial trials. The seedlings were transplanted June 2003 at Buttonwillow, California and inspected twice for any off-types prior to bolting. Eight plants with less leaf blister and less frill were removed. Subsequently another fifteen plants that bolted early were removed.
9. Experimental 15.2131 was trialed extensively in the autumn 2003 and spring 2004 as 15.2131 in Salinas California and Yuma, Arizona. In May 2004 experimental 15.2131 was named 'Bergam's Green'.
10. Stock seed from 2003 California production was increased the summer of 2004 at Buttonwillow, California for additional trials in commercial production fields in Salinas, California and Yuma, Arizona. Variants with less leaf blister and frill on the leaf margins were noted at less than 3 per 1,000 plants and removed from the crop.
11. Seed of Bergam's Green has been trialed extensively for two years in Salinas, California and Yuma, Arizona and has proven to be stable and free of variants except as noted above.

Addendum to Exhibit A: Lettuce PVP Application #200500262, 'Bergam's Green'

Seed of Bergam's Green has been trialed extensively for two years in Salinas, CA and Yuma, AZ and has proven to be stable and uniform. Variants with less leaf blister and frill on the leaf margin were noted at less than 3 per 1,000 plants and removed from the crop.

Exhibit B – 'Bergam's Green'Statement of Distinctness

'Bergam's Green' is a green leaf type of lettuce that is adapted to the West Coast production areas of the United States. 'Bergam's Green' is most similar to 'North Star'.

Both varieties are black seeded, have good tipburn resistance, are resistant to corky root (*Sphingomonas (Rhizomonas) suberifaciens*), and have a tendency to produce suckers (side shoots at basal core).

'Bergam's Green' differs from 'North Star' in that 'Bergam's Green' has larger sized frame -and leaf and has a larger core diameter compared to 'North Star'. Furthermore, the seed stalk of 'North Star' tends to faciate while the seed stalk of 'Bergam's Green' does not faciate. In addition, 'Bergam's Green' is resistant to lettuce dieback while 'North Star' is susceptible. The color of 'Bergam's Green' is 144A on the Royal Horticultural Society Color Chart versus 146B for North Star.

ADDENDUM TO EXHIBIT B – BERGAM'S GREENStatement of Distinctness

Both 'Bergam's Green' and 'North Star' are resistant to corky root, while 'Two Star' is susceptible to corky root (*Sphingomonas (Rhizomonas) suberifaciens*). – see exhibit D.

The seed stalk of 'North Star' tends to faciate more often than 'Bergam's Green', while 'Two Star' does not show faciation of the seed stalk. – see exhibit D.

Both 'Bergam's Green' and 'Two Star' are resistant to lettuce dieback, while 'North Star' is susceptible to lettuce dieback. – see exhibit D.

Addendum to Exhibit B: Lettuce PVP Application #200500262, 'Bergam's Green'

The mature leaf color of 'Bergam's Green' is medium green while 'Grand Rapids TBR' is light green. In addition, Bergam's Green is resistant to corky root (*Sphingomonas (Rhizomonas) suberifaciens* – pathotype CA I) and lettuce die back (tomato bushy stunt virus) while 'Grand Rapids TBR' is not listed being resistant to corky root (*Sphingomonas (Rhizomonas) suberifaciens* – pathotype CA I) and lettuce die back (tomato bushy stunt virus).

Bergam's Green is resistant to corky root (*Sphingomonas (Rhizomonas) suberifaciens* – pathotype CA I) and lettuce die back (tomato bushy stunt virus) while 'Green Ice' is not listed being resistant to corky root (*Sphingomonas (Rhizomonas) suberifaciens* – pathotype CA I) and lettuce die back (tomato bushy stunt virus).

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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**U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705**

**Exhibit C**

**OBJECTIVE DESCRIPTION OF VARIETY  
Lettuce (*Lactuca sativa* L.)**

NAME OF APPLICANT (S) <b>ENZA ZADEN BEHEER B.V.</b>	TEMPORARY OR EXPERIMENTAL DESIGNATION <b>15.2131</b>	VARIETY NAME <b>BERGAM'S GREEN</b>
ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country) <b>POSTBUS 7, 1600 AA ENKHUIZEN HALING 1<sup>e</sup>, 1602 DB ENKHUIZEN THE NETHERLANDS</b>		FOR OFFICIAL USE ONLY  PVPO NUMBER <b>200500262</b>

Place the appropriate number that describes the varietal character in the boxes below. Place a zero in the first box (e.g. 

0	9	9
---	---	---

 or 

0	9
---	---

) when number is either 99 or less or 9 or less. Measured data should be the mean of an appropriate number (at least 20) of well space plants. Royal Horticultural Society or any recognized color standard may be used to determine plant colors.

The Location of the Test Area is:

**YUMA, AZ AND SALINAS, CA**

Color System Used:

**RHS**

SPECIFIC VARIETIES USED FOR COMPARISON AS CHECK VARIETIES IN THIS APPLICATION: Use standard regional check varieties, which are adapted to your area. One of the comparison varieties must be the most similar variety used in Exhibit B.

Application Variety (a1) **BERGAM'S GREEN** Most Similar Variety (c1) **NORTH STAR**

Standard Regional Check Variety (c2) **TWO STAR**

**1. PLANT TYPE:** (See List of Suggested Check Varieties on Page 8)

01 = Cutting/Leaf  
02 = Butterhead  
03 = Bibb

04 = Cos or Romaine  
05 = Great Lakes Group  
06 = Vanguard Group

07 = Salinas Group  
08 = Eastern (Ithaca) Group  
09 = Stem

10 = Latin  
11 = Other (Specify) \_\_\_\_\_

(a1) 

0	1
---	---

(c1) 

0	1
---	---

(c2) 

0	1
---	---

**2. SEED:**

(a1) 

2
---

 } COLOR  
(c1) 

2
---

 } 1 = White (Silver Gray)  
(c2) 

2
---

 } 2 = Black (Grey Brown)  
3 = Brown (Amber)

(a1) 

2
---

 } LIGHT DORMANCY  
(c1) 

2
---

 } 1 = Light Required  
(c2) 

2
---

 } 2 = Light Not Required

(a1) 

1
---

 } HEAT DORMANCY  
(c1) 

1
---

 } 1 = Susceptible  
(c2) 

1
---

 } 2 = Not Susceptible

**3. COTYLEDON TO FOURTH LEAF STAGE:** NOTE: Provide a color photograph or photocopy of the fourth leaf from 20 day-old seedling grown under optimal conditions.

SHAPE OF COTYLEDONS: 1 = Broad

2 = Intermediate

3 = Spatulate

(a1) 

2
---

(c1) 

2
---

(c2) 

2
---

SHAPE OF FOURTH LEAF:

(a1) 

3
---

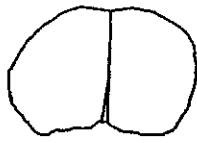
(c1) 

3
---

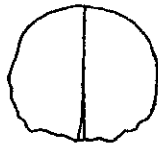
(c2) 

3
---

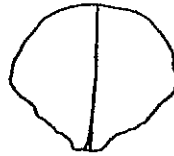
## 3. COTYLEDON TO FOURTH LEAF STAGE: (continued)



1. Transverse oval



2. Round



3. Oval



4. Elongated



5. Lanceolate



6. Pinnately lobed

## LENGTH/WIDTH INDEX OF FOURTH LEAF: LW x 10

(a1)  (c1)  (c2)  

## APICAL MARGIN:

1 = Entire  
2 = Crenate/Gnawed  
3 = Finely Dentate4 = Moderately Dentate  
5 = Coarsely Dentate  
6 = Incised7 = Lobed  
8 = Other (Specify) \_\_\_\_\_(a1) (c1) (c2) 

## BASAL MARGIN: (Use the options for Apical Margin above)

(a1) (c1) (c2) 

## UNDULATION:

1 = Flat

2 = Slight

3 = Medium

4 = Marked

(a1) (c1) (c2) 

## GREEN COLOR:

1 = Yellow Green  
2 = Light Green3 = Medium Green  
4 = Dark Green5 = Blue Green  
6 = Silver Green

7 = Grey Green

(a1) (c1) (c2) 

## ANTHOCYANIN:

## DISTRIBUTION:

1 = Absent  
2 = Margin Only3 = Spotted  
4 = Throughout

5 = Other (Specify) \_\_\_\_\_

(a1) (c1) (c2) 

## CONCENTRATION:

1 = Light

2 = Moderate

3 = Intense

N.A.

(a1) (c1) (c2) 

## ROLLING:

1 = Absent

2 = Present

(a1) (c1) (c2) 

## CUPPING:

1 = Uncupped

2 = Slight

3 = Markedly

(a1) (c1) (c2) 

## REFLEXING:

1 = None

2 = Apical Margin

3 = Lateral Margins

(a1) (c1) (c2)

**4. MATURE LEAVES** (Observe Harvest-Mature Outer Leaves)

NOTE: Provide color photo of a harvest-mature leaf which accurately shows color and margin characteristics.

**MARGIN:****INCISION DEPTH:**  
(deepest penetration  
of the margin)

1 = Absent/Shallow (Dark Green Boston)

2 = Moderate (Vanguard)

3 = Deep (Great Lakes 659)

(a1)

(c1)

(c2)

**INDENTATION:** (Finest divisions of the margin)

1 = Entire (Dark Green Boston)

4 = Crenate (Vanguard)

2 = Shallowly Dentate (Great Lakes 65)

5 = Other (Specify) \_\_\_\_\_

3 = Deeply Dentate (Great Lakes 659)

(a1)

(c1)

(c2)

**UNDULATIONS OF THE  
APICAL MARGIN:**

1 = Absent/Slight (Dark Green Boston) 2 = Moderate (Vanguard)

3 = Strong (Great Lakes 659)

(a1)

(c1)

(c2)

**GREEN COLOR:**

1 = Very Light Green (Bibb)

3 = Medium Green (Great Lakes)

5 = Very Dark Green

2 = Light Green (Minetto)

4 = Dark Green (Vanguard)

6 = Other (Specify) \_\_\_\_\_

(a1)

(c1)

(c2)

**ANTHOCYANIN:****DISTRIBUTION:**

1 = Absent

3 = Spotted (California Cream Butter)

5 = Other (Specify) \_\_\_\_\_

2 = Margin Only (Big Boston)

4 = Throughout (Prize Head)

(a1)

(c1)

(c2)

**CONCENTRATION:**

1 = Light (Iceberg)

2 = Moderate (Prize Head)

3 = Intense (Ruby)

N.A.

(a1)

(c1)

(c2)

**SIZE:**

1 = Small

2 = Medium

3 = Large

(a1)

(c1)

(c2)

**GLOSSINESS:**

1 = Dull (Vanguard)

2 = Moderate (Salinas)

3 = Glossy (Great Lakes)

(a1)

(c1)

(c2)

**BLISTERING:**1 = Absent/Slight  
(Salinas)2 = Moderate  
(Vanguard)3 = Strong  
(Prize Head)

(a1)

(c1)

(c2)

**LEAF THICKNESS:**

1 = Thin

2 = Intermediate

3 = Thick

(a1)

(c1)

(c2)

**TRICHOMES:**

1 = Absent (Smooth)

2 = Present (Spiny)

(a1)

(c1)

(c2)

**5. PLANT:****SPREAD OF FRAME LEAVES:**

(a1)

cm

(c1)

cm

(c2)

cm

## 5. PLANT: (continued)

HEAD DIAMETER: (Market Trimmed with Single Cap Leaf)

N.A.

(a1) ☐ ☐ cm(c1) ☐ ☐ cm(c2) ☐ ☐ cm

HEAD SHAPE:

1 = Flattened

2 = Slightly Flattened

3 = Spherical

4 = Elongate

5 = Non-Heading

6 = Other (Specify) \_\_\_\_\_

(a1) ☐ 5(c1) ☐ 5(c2) ☐ 5

HEAD SIZE CLASS:

1 = Small

2 = Medium

3 = Large

(a1) ☐ 3(c1) ☐ 2(c2) ☐ 3

HEAD PER CARTON:

(a1) ☐ 24(c1) ☐ 30(c2) ☐ 24

HEAD WEIGHT:

(a1) ☐ 546 g.(c1) ☐ 453 g.(c2) ☐ 579 g.

HEAD FIRMNESS:

1 = Loose

2 = Moderate

3 = Firm

4 = Very Firm

N.A.

(a1) ☐(c1) ☐(c2) ☐

## 6. BUTT:

SHAPE:

1 = Slightly Concave

2 = Flat

3 = Rounded

(a1) ☐ 3(c1) ☐ 3(c2) ☐ 1

MIDRIB:

1 = Flattened (Salinas)

2 = Moderately Raised

3 = Prominently Raised (Great Lakes 659)

(a1) ☐ 2(c1) ☐ 2(c2) ☐ 2

## 7. CORE:

DIAMETER AT BASE OF HEAD:

(a1) ☐ 28 mm(c1) ☐ 24 mm(c2) ☐ 25 mm

RATIO OF HEAD DIAMETER/CORE DIAMETER:

N.A.

(a1) ☐ ☐ ☐(c1) ☐ ☐ ☐(c2) ☐ ☐ ☐

CORE HEIGHT FROM BASE OF HEAD TO APEX:

(a1) ☐ 52 mm(c1) ☐ 44 mm(c2) ☐ 54 mm

\* 8. BOLTING: (Give First Water Date: 4/16/2005) NOTE: First Water Date is the date seed first receives adequate moisture to germinate. This can and often does equal the planting date.

NUMBER OF DAYS FROM FIRST WATER DATE TO SEED STALK EMERGENCE: (summer conditions)

(a1) ☐ 92(c1) ☐ 98(c2) ☐ 78

BOLTING CLASS:

1 = Very Slow

2 = Slow

3 = Medium

4 = Rapid

5 = Very Rapid

(a1) ☐ 2(c1) ☐ 2(c2) ☐ 3

HEIGHT OF MATURE SEED STALK:

☐ 119☐ 101☐ 117

(a1) cm (c1) cm (c2) cm

## 8. BOLTING: (continued)

SPREAD OF BOLTER PLANT: (At widest point)

(a1) 37 cm (c1) 40 cm (c2) 46 cm

BOLTER LEAVES:

1 = Straight

2 = Curved

(a1) 2 (c1) 2 (c2) 2

MARGIN:

1 = Entire 2 = Dentate

(a1) 2 (c1) 2 (c2) 2

COLOR:

1 = Light Green 2 = Medium Green 3 = Dark Green

(a1) 2 (c1) 2 (c2) 2

BOLTER HABIT:

TERMINAL INFLORESCENCE:

1 = Absent

2 = Present

(a1) 2 (c1) 2 (c2) 2

LATERAL SHOOTS:

1 = Absent

2 = Present

(a1) 1 (c1) 1 (c2) 1

BASAL SIDE SHOOTS:

1 = Absent

2 = Present

(a1) 2 (c1) 2 (c2) 1

## 9. MATURITY: (earliness of harvest-mature head formation)

NOTE: Complete this section for at least one season.

SEASON	APPLICATION VARIETY No. of Days <sup>1</sup>			MOST SIMILAR VARIETY No. of Days <sup>1</sup>			STANDARD REGIONAL CHECK VARIETY No. of Days <sup>1</sup>		
Spring	51	50		51	50		54	54	
Summer	40	40		40	43		43	43	
Fall	46	48		46	48		48	49	
Winter	49			49			52		

<sup>1</sup> First Water Date to Harvest

Give Planting Date(s) and Location(s):

Spring: 2/28/2003, 3/5/2003 : SALINAS, CA

Summer: 5/19/2003, 6/5/2003 : SALINAS, CA

Fall: 8/22/2004, 8/26/2004 : SALINAS, CA

Winter: 10/4/2004 : YUMA, AZ

## 10. ADAPTATION:

PRIMARY REGIONS OF ADAPTATION (tested and proven adapted):

0 = Not Tested 1 = Not Adapted 2 = Adapted

2 Southwest (CA and/or AZ desert) 2 West Coast 0 Northeast

0 North Central 0 Southeast 0 Other (Specify) \_\_\_\_\_

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## 10. ADAPTATION: (Continued)

SEASON:

2 ☒ Spring (Area WEST COAST)2 ☒ Summer (Area WEST COAST)2 ☒ Fall (Area WEST COAST)☐ Winter (Area \_\_\_\_\_)

0

GREENHOUSE 0 = Not Tested

1 = Not Adapted

2 = Adapted

3

SOIL TYPE: 1 = Mineral

2 = Organic

3 = Both

## 11. VIRAL DISEASES:

1 = Immune

3 = Resistant

5 = Moderately Resistant/Moderately Susceptible

7 = Susceptible

9 = Highly Susceptible

Big Vein

(a1)

7

(c1)

7

(c2)

7

Lettuce Mosaic

(a1)

7

(c1)

7

(c2)

7

Cucumber Mosaic

(a1)

(c1)

(c2)

Tomato Bushy Stunt, cause of dieback

(a1)

3

(c1)

7

(c2)

3

Turnip Mosaic

(a1)

(c1)

(c2)

Beet Western Yellows

(a1)

(c1)

(c2)

Lettuce Infectious Yellows

(a1)

(c1)

(c2)

Other (Specify) \_\_\_\_\_

(a1)

(c1)

(c2)

## 12. FUNGAL/BACTERIAL DISEASES:

1 = Immune

3 = Resistant

5 = Moderately Resistant/Moderately Susceptible

7 = Susceptible

9 = Highly Susceptible

Corky Root Rot  
(Races: CA I)

(a1)

3

(c1)

3

(c2)

7

Downy Mildew  
(Races: CA I - VIII)

(a1)

7

(c1)

7

(c2)

7

Powdery Mildew

(a1)

(c1)

(c2)

Sclerotinia Drop

(a1)

7

(c1)

7

(c2)

7

Bacterial Soft Rot  
(*Pseudomonas* spp. and others)

(a1)

(c1)

(c2)

Botrytis (Grey Mold)

(a1)

7

(c1)

7

(c2)

7

Verticillium Wilt

(a1)

(c1)

(c2)

Bacterial Leaf Spot

(a1)

(c1)

(c2)

Anthracnose

(a1)

(c1)

(c2)

Other (Specify) \_\_\_\_\_

(a1)

(c1)

(c2)

## 13. INSECTS:

1 = Immune

3 = Resistant

5 = Moderately Resistant/Moderately Susceptible

7 = Susceptible

9 = Highly Susceptible

Cabbage Loopers

(a1)

(c1)

(c2)

Root Aphids

(a1)

(c1)

(c2)

Green Peach Aphid

(a1)

7

(c1)

7

(c2)

7

Lettuce Aphid

(a1)

7

(c1)

7

(c2)

7

Pea Leafminer	(a1)	<input type="text" value="7"/>	(c1)	<input type="text" value="7"/>	(c2)	<input type="text" value="7"/>
Other (Specify) _____	(a1)	<input type="text"/>	(c1)	<input type="text"/>	(c2)	<input type="text"/>

**14. PHYSIOLOGICAL STRESSES:**

	1 = Immune	3 = Resistant	5 = Moderately Resistant/Moderately Susceptible	7 = Susceptible	9 = Highly Susceptible
Tipburn		(a1) <input type="text" value="3"/>	(c1) <input type="text" value="3"/>	(c2) <input type="text" value="5"/>	
Heat		(a1) <input type="text" value="5"/>	(c1) <input type="text" value="5"/>	(c2) <input type="text" value="5"/>	
Drought		(a1) <input type="text"/>	(c1) <input type="text"/>	(c2) <input type="text"/>	
Cold		(a1) <input type="text" value="7"/>	(c1) <input type="text" value="7"/>	(c2) <input type="text" value="5"/>	
Salt		(a1) <input type="text"/>	(c1) <input type="text"/>	(c2) <input type="text"/>	
Brown Rib (Rib Discoloration, Rib Blight)		(a1) <input type="text" value="3"/>	(c1) <input type="text" value="3"/>	(c2) <input type="text" value="3"/>	
Other (Specify) _____		(a1) <input type="text"/>	(c1) <input type="text"/>	(c2) <input type="text"/>	

**15. POST HARVEST STRESS:**

	1 = Immune	3 = Resistant	5 = Moderately Resistant/Moderately Susceptible	7 = Susceptible	9 = Highly Susceptible
Pink Rib		(a1) <input type="text" value="3"/>	(c1) <input type="text" value="3"/>	(c2) <input type="text" value="3"/>	
Russet Spotting		(a1) <input type="text" value="3"/>	(c1) <input type="text" value="3"/>	(c2) <input type="text" value="3"/>	
Rusty Brown Discoloration		(a1) <input type="text" value="3"/>	(c1) <input type="text" value="3"/>	(c2) <input type="text" value="3"/>	
Internal Rib Necrosis (Blackheart, Grey Rib, Grey Streak)		(a1) <input type="text" value="3"/>	(c1) <input type="text" value="3"/>	(c2) <input type="text" value="3"/>	
Brown Stain		(a1) <input type="text" value="3"/>	(c1) <input type="text" value="3"/>	(c2) <input type="text" value="3"/>	

**16. BIOCHEMICAL OR ELECTROPHORETIC MARKERS:**

## 17. COMMENTS:

- 1) QUANTITATIVE DATA ARE BASED ON YUMA AND SALINAS DATA SET TOGETHER.
- \*2) BOLTING DATA WILL BE FINALIZED DURING SUMMER 2005.

## SUGGESTED CHECK VARIETIES

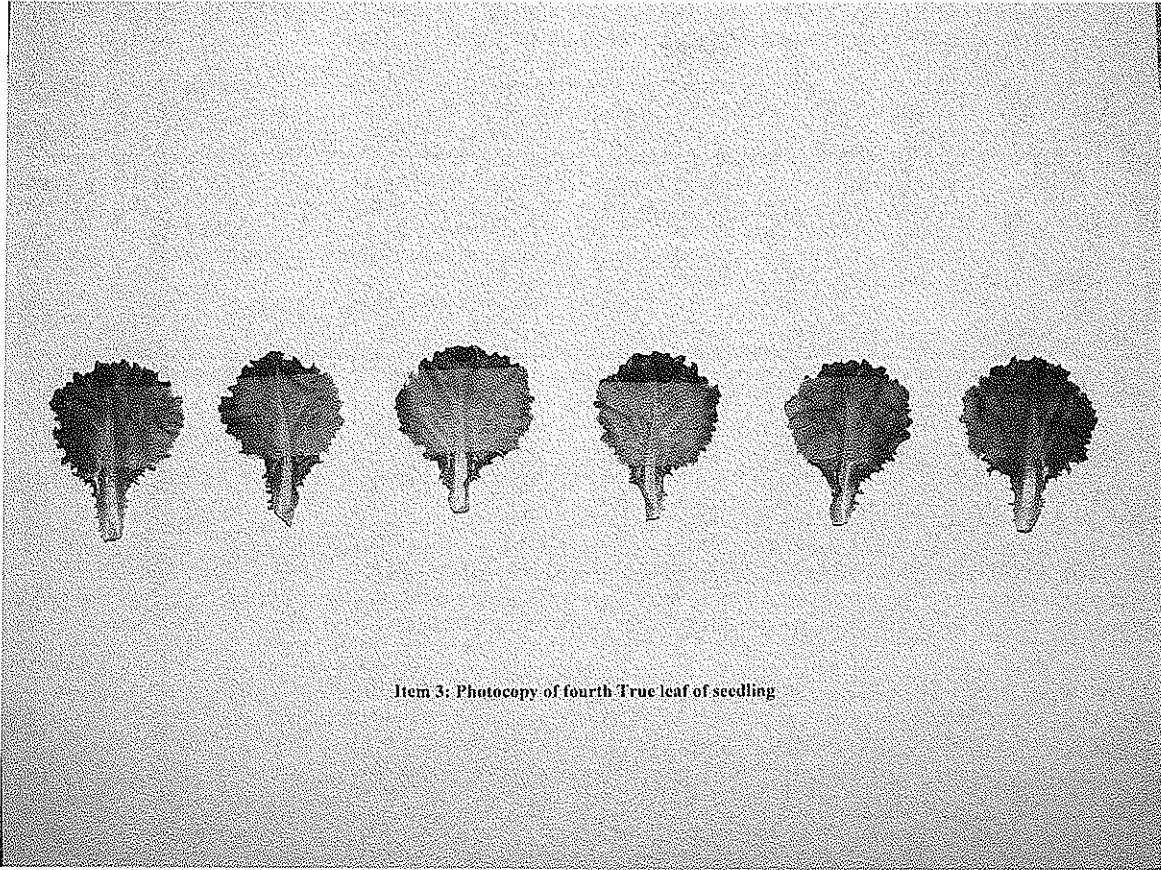
TYPE	CHECK VARIETY
1 Cutting/Leaf	Waldmann's Green
2 Butterhead	Dark Green Boston
3 Bibb	Bibb
4 Cos or Romain	Parris Island
5 Great Lakes Group	Great Lakes 659-700
6 Vanguard Group	Vanguard
7 Salinas Group	Salinas
8 Eastern Group	Ithaca
9 Stem	Celtuce
10 Latin	Little Gem

## REFERENCES

- Bowring, J.D.C., 1969, "The Identification of Varieties of Lettuce (*Lactuca Sativa* L.)". Journal of the National Institute of Agricultural Botany 11:499-520. National Institute of Agricultural Botany, Cambridge, UK.
- Davis, R.M., K.V. Subbarao, R.N. Raid, and E.A. Kurtz, 1997. "Compendium of Lettuce Diseases". APS Press, St. Paul, MN.
- Michelmore, R.W., J. M. Norwood, D.S. Ingram, I.R. Crute and P. Nicholson. 1984. "The inheritance of virulence in *Bremia lactucae* to match resistance factors 3, 4, 5, 6, 8, 9, 10, and 11 in lettuce (*Lactuca sativa*)". Plant Pathology 32:176-177.
- Norwood, J.M., R.W. Michelmore, I.R. Crute and D.S. Ingram. 1983. "The inheritance of specific virulence of *Bremia lactucae* (Downy Mildew) to match R-factors 1, 2, 4, 6, and 11 in lettuce (*Lactuca sativa*)". Plant Pathology 32:176-177.
- Rodenburg, C.M., et al., 1960. "Varieties of Lettuce. An International Monograph", Instituut voor de Verdeling van Tuinbouwgewassen (IVT), Wageningen, NL.
- Ryder, E.J., 1999, *Lettuce, Endive, and Chicory*, CABI Publications, Wallingford, UK.

Exhibit C – 'Bergam's Green'

Fourth leaf of 'Bergam's Green'



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Exhibit C – 'Bergam's Green'

Mature plant of Bergam's Green



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Exhibit C – 'Bergam's Green'

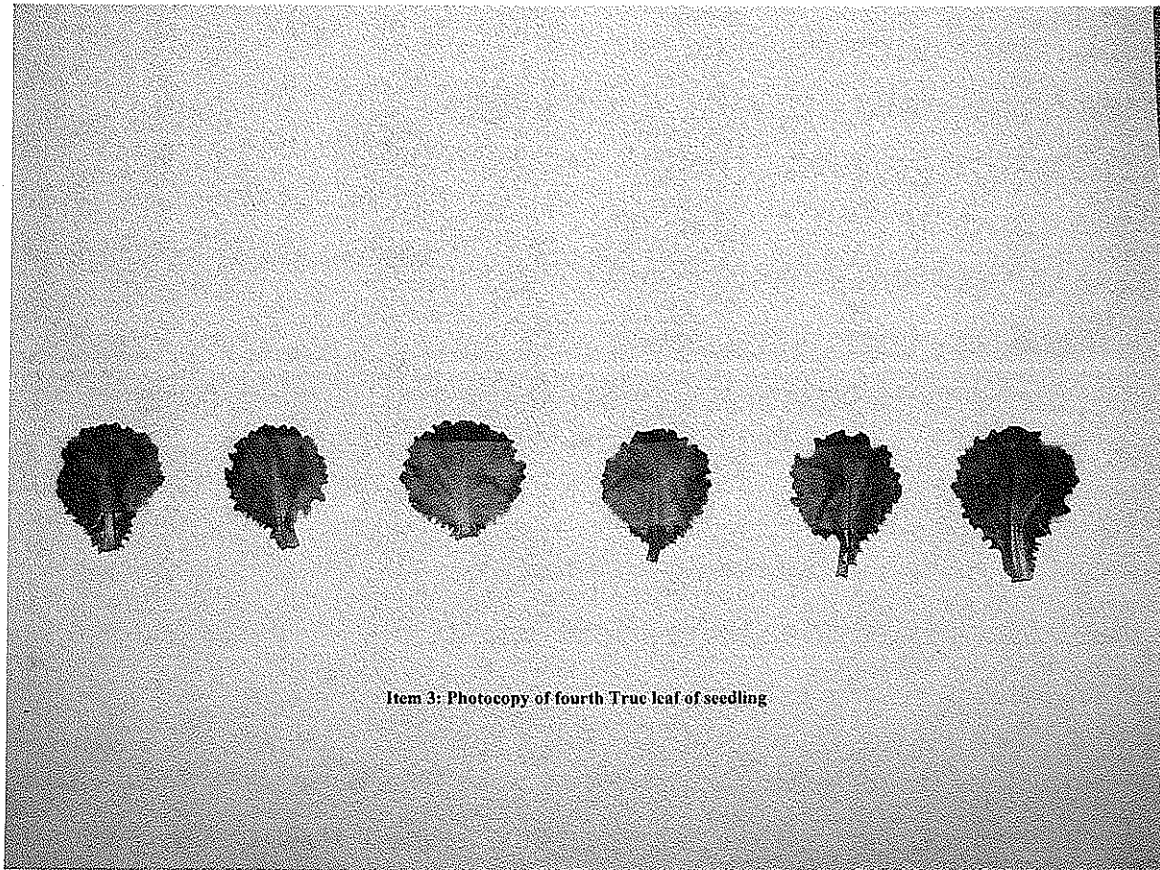
Mature leaf of 'Bergam's Green'



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Exhibit C – 'Bergam's Green'

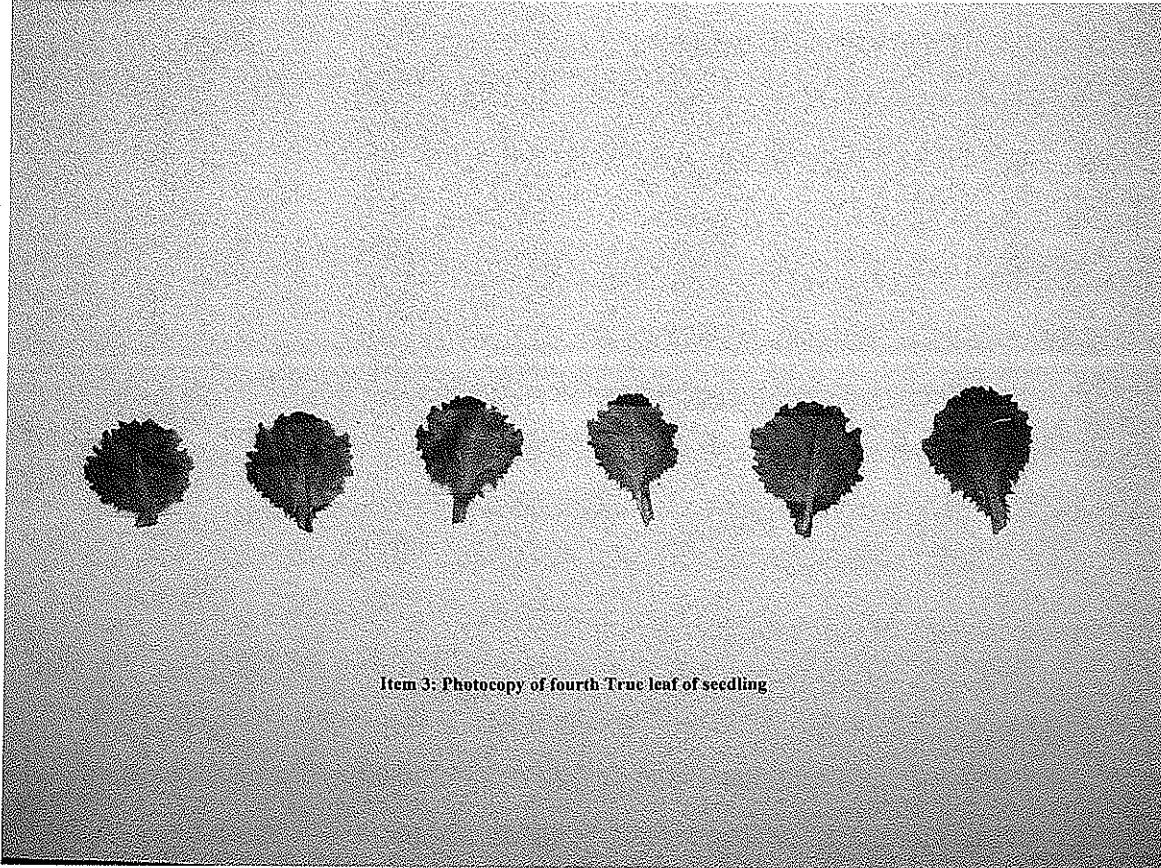
Fourth leaf of 'North Star'



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Exhibit C – 'Bergam's Green'

Fourth leaf of 'Two Star'



Item 3: Photocopy of fourth True leaf of seedling

Exhibit C – 'Bergam's Green'

Mature plant of 'North Star'



Exhibit C – 'Bergam's Green'

Mature plant of 'Two Star'



Exhibit C – 'Bergam's Green'

Mature leaf of 'North Star'



Exhibit C – 'Bergam's Green'

Mature leaf of 'Two Star'



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Exhibit C - 'Bergam's Green'  
Quantitative data 'weight' - Salinas

Location S3: Grower Bouttenet, Ranch #5, Boronda, Salinas, CA (rep1)

Wet date: 08/22/2004 Harvest date: 10/25/2004

Location S4: Grower Bouttenet, Ranch #3, Blanco, Salinas, CA (rep 2)

Wet date: 08/26/2004 Harvest date: 11/01/2004

Plant	weight (grams)			
	S3		S4	
	Bergams Green	North Star	BergamsGreen	North Star
1	612	377	726	538
2	508	541	578	386
3	460	449	538	400
4	441	314	640	474
5	575	435	518	634
6	621	454	664	455
7	525	406	559	558
8	451	389	555	643
9	591	418	502	495
10	432	476	449	420
Mean	521.6	425.9	572.9	500.3

Anova: Two-Factor With Replication

SUMMARY Bergams Green North Star Total

Trial 1

Count	10	10	20
Sum	5216	4259	9475
Average	521.6	425.9	473.75
Variance	5468.933333	3766.322222	6784.723684

Trial 2

Count	10	10	20
Sum	5729	5003	10732
Average	572.9	500.3	536.6
Variance	6821.211111	8370.455556	8583.094737

Total

Count	20	20
Sum	10945	9262
Average	547.25	463.1
Variance	6514.197368	7205.673684

ANOVA

Source of Varia.	SS	df	MS	F	P-value	F crit
Rep	39501.225	1	39501.225	6.468473538	0.015419898	4.113161367
Variety	70812.225	1	70812.225	11.59576706	0.001637849	4.113161367
Rep x Varie	1334.025	1	1334.025	0.21845159	0.643039141	4.113161367
Error	219842.3	36	6106.730556			
Total	331489.775	39				

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Exhibit C - 'Bergam's Green'  
Quantitative data 'core height' - Yuma

Location Y1: Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 1)

Wet date: 10/04/2004 Harvest date: 12/09/2004

Location Y2: Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 2)

Wet date: 10/04/2004 Harvest date: 12/09/2004

Plant	core height (cm)			
	Y1		Y2	
	Bergams Green	North Star	BergamsGreen	North Star
1	4.10	4.10	3.90	4.00
2	4.30	3.85	4.50	3.25
3	4.45	4.10	3.50	4.70
4	4.65	4.10	5.50	3.70
5	4.68	3.95	5.50	3.95
6	4.50	3.90	5.10	4.25
7	4.80	3.75	4.80	4.20
8	5.10	3.60	4.90	3.50
9	4.65	4.10	4.65	4.10
10	4.45	3.75	4.75	4.05
Mean	4.57	3.92	4.71	3.97

Anova: Two-Factor With Replication

SUMMARY	Bergams Green	North Star	Total
Y1			
Count	10	10	20
Sum	45.68	39.2	84.88
Average	4.568	3.92	4.244
Variance	0.07624	0.032888889	0.162193684

Y2			
Count	10	10	20
Sum	47.1	39.7	86.8
Average	4.71	3.97	4.34
Variance	0.401555556	0.166777778	0.413315789

Total			
Count	20	20	
Sum	92.78	78.9	
Average	4.639	3.945	
Variance	0.231630526	0.095236842	

ANOVA

Source of Variat	SS	df	MS	F	P-value	F crit
Rep	0.09216	1	0.09216	0.544148423	0.465499879	4.113161367
Variety	4.81636	1	4.81636	28.4376595	5.41815E-06	4.113161367
Rep x Variet	0.02116	1	0.02116	0.124936856	0.725802157	4.113161367
Error	6.09716	36	0.169365556			
Total	11.02684	39				

Exhibit C - 'Bergam's Green'Quantitative data 'core height' - Salinas

Location S3: Grower Bouttenet, Ranch #5, Boronda, Salinas, CA (rep1)

Wet date: 08/22/2004 Harvest date: 10/25/2004

Location S4: Grower Bouttenet, Ranch #3, Blanco, Salinas, CA (rep 2)

Wet date: 08/26/2004 Harvest date: 11/01/2004

Plant	core height (cm)			
	S3		S4	
	Bergams Green	North Star	BergamsGreen	North Star
1	5.90	4.50	6.15	5.35
2	5.75	4.85	6.20	4.00
3	5.60	4.25	4.75	3.75
4	4.35	3.80	6.65	4.10
5	5.90	5.15	5.68	5.90
6	5.35	4.70	6.20	4.95
7	6.10	5.30	6.10	5.20
8	5.50	4.75	5.80	5.65
9	5.55	4.90	5.65	5.50
10	4.55	5.35	5.30	4.85
Mean	5.46	4.76	5.85	4.93

## Anova: Two-Factor With Replication

## SUMMARY Bergams Green North Star Total

S3			
Count	10	10	20
Sum	54.55	47.55	102.1
Average	5.455	4.755	5.105
Variance	0.331361111	0.23025	0.394973684

S4			
Count	10	10	20
Sum	58.48	49.25	107.73
Average	5.848	4.925	5.3865
Variance	0.291262222	0.554027778	0.624592368

Total			
Count	20	20	
Sum	113.03	96.8	
Average	5.6515	4.84	
Variance	0.335571316	0.379105263	

## ANOVA

Source of Varia.	SS	df	MS	F	P-value	F crit
Rep	0.7924225	1	0.7924225	2.25295863	0.142079894	4.113161367
Variety	6.5853225	1	6.5853225	18.72291506	0.000114883	4.113161367
Rep x Var	0.1243225	1	0.1243225	0.353464786	0.555876709	4.113161367
Error	12.66211	36	0.351725278			
Total	20.1641775	39				

ADDENDUM TO EXHIBIT C - BERGAM'S GREEN

200500202

Exhibit C - 'Bergam's Green'

Quantitative data 'bolting'

Location S5 : 525 Lucy Brown Lane, San Juan Bautista, CA Spring Wet date: 03/16/2005  
 Location S6 : 525 Lucy Brown Lane, San Juan Bautista, CA Spring Wet date: 03/09/2005  
 Location S7 : 525 Lucy Brown Lane, San Juan Bautista, CA Summer Wet date: 04/16/2005

Trial	Plant	# days to seed stalk emergence			height of mature stalk (cm)			spread of bolter plant (cm)		
		Bergams Green	North Star	Two Star	Bergams Green	North Star	Two Star	Bergams Green	North Star	Two Star
S5	1	58	58	49	100.8	90.4	128.5	44.2	52.5	49.8
S5	2	62	58	56	114.7	86.7	137.0	40.5	50.9	38.8
S5	3	64	56	55	116.2	98.8	117.0	44.3	56.5	46.2
S5	4	66	58	46	114.4	107.3	107.2	43.0	57.8	38.4
S5	5	64	58	43	120.5	103.0	108.2	52.8	53.7	38.5
S5	6	67	52	41	114.2	103.5	116.0	44.6	59.4	34.1
S5	7	67	57	47	114.3	102.7	118.5	46.7	53.5	33.0
S5	8	61	56	52	112.4	107.1	126.6	41.5	63.4	46.3
S5	9	57	62	44	107.6	111.3	98.4	43.2	51.5	43.3
S5	10	63	63	43	122.7	116.8	116.0	40.4	59.7	46.0
S5	11	63	53	51	84.8	106.7	114.3	24.3	69.3	40.2
S5	12	62	56	44	97.0	103.5	108.8	41.6	61.7	49.8
S5	13	59	63	46	100.5	111.7	113.2	44.2	60.8	48.7
S5	14	63	62	49	123.5	123.1	125.0	46.4	71.4	45.1
S5	15	60	58	53	106.0	99.2	113.7	41.4	57.8	39.5
S5	16	59	58	45	96.2	111.7	121.0	38.8	60.2	37.7
S5	17	62	60	44	115.2	110.6	115.3	43.4	62.3	39.0
S5	18	56	56	53	98.8	109.8	122.8	52.8	54.0	44.3
S5	19	56	57	44	92.4	116.5	114.4	40.2	59.8	41.0
S5	20	59	52	53	100.9	104.8	114.2	46.8	48.5	40.0
Mean		61.4	57.7	47.9	107.7	106.3	116.8	43.1	58.2	42.0
Variance		11.3	10.5	20.8	115.9	73.6	72.5	33.4	34.7	24.0
S6	1	74	72	74	112.2	113.2	141.4	43.4	57.3	30.5
S6	2	82	80	73	124.0	109.8	122.8	30.3	42.2	33.2
S6	3	74	77	74	110.2	125.8	139.2	35.5	50.2	35.5
S6	4	83	78	75	116.8	109.6	142.0	31.4	40.4	30.3
S6	5	74	77	75	105.5	112.5	142.5	30.3	44.3	30.9
S6	6	83	79	74	115.5	111.6	130.0	29.6	50.2	32.9
S6	7	73	79	-	107.2	120.7	-	36.1	52.5	-
S6	8	73	76	76	92.0	106.0	130.5	34.3	58.4	34.5
S6	9	73	84	79	116.2	113.2	151.0	39.4	54.2	27.8
S6	10	77	76	79	122.5	113.3	146.9	34.5	45.6	29.4
S6	11	77	79	77	117.1	109.8	130.2	36.7	37.4	35.4
S6	12	73	-	74	110.0	-	119.3	43.1	-	28.0
Mean		76.3	77.9	75.5	112.4	113.2	136.0	35.4	48.4	31.7
Variance		16.6	8.9	4.3	73.0	30.6	101.4	22.3	48.4	7.8
S7	1	88	105	75	128.2	110.6	113.1	35.9	47.4	43.4
S7	2	103	103	79	127.5	101.3	97.6	34.4	43.4	51.9
S7	3	92	103	74	112.4	104.8	113.4	33.1	48.2	50.8
S7	4	85	93	78	122.5	102.7	112.2	39.1	47.6	45.3
S7	5	84	88	74	126.8	76.2	112.5	41.5	35.5	41.1
S7	6	86	92	74	114.1	90.6	115.3	38.6	44.7	49.4

## ADDENDUM TO EXHIBIT C - BERGAM'S GREEN

200500262

Exhibit C - 'Bergam's Green'Quantitative data 'bolting' (continue)

Trial	Plant	# days to seed stalk emergence			height of mature stalk (cm)			spread of bolter plant (cm)		
		Bergams Green	North Star	Two Star	Bergams Green	North Star	Two Star	Bergams Green	North Star	Two Star
S7	7	86	93	78	119.7	88.4	117.7	40.1	32.7	39.8
S7	8	86	106	76	125.3	114.5	112.2	36.6	39.3	47.4
S7	9	85	106	77	113.7	94.2	118.5	36.5	43.8	40.6
S7	10	86	103	85	120.2	104.2	115.1	29.8	42.3	44.2
S7	11	84	86	77	99.4	107.6	109.3	40.2	35.1	52.6
S7	12	103	88	78	108.5	109.8	122.9	23.2	39.4	50.7
S7	13	95	103	78	117.1	84.2	123.5	38.7	39.5	45.8
S7	14	103	101	79	107.3	107.1	129.3	44.2	36.4	50.8
S7	15	93	95	80	110.2	75.2	120	37.8	39.3	39.6
S7	16	104	98	76	116.5	122.5	128.8	31.3	39.3	50.3
S7	17	99	106	82	117.5	112.5	126.5	40.8	37.7	46.1
S7	18	105	106	82	132.3	118.8	113.7	39.7	39.8	43.8
S7	19	88	88	82	134.5	105.1	115.9	35.9	37.6	49.8
S7	20	85	103	82	129.7	97.5	117.5	39.4	39.2	42.7
Mean		92.0	98.3	78.3	119.2	101.4	116.8	36.8	40.4	46.3
Variance		62.4	51.4	9.7	85.2	172.3	53.5	22.6	18.6	18.4

## Exhibit C - 'Bergam's Green'

Quantitative data length / width index of fourth leaf

Location : 525 Lucy Brown Lane, San Juan Bautista, CA

Sowing: 03/16/05

Evaluation: 04/14/05

Plant #	BergamsGreen			North Star			Two Star		
	Length	Width	Ratio L/W	Length	Width	Ratio L/W	Length	Width	Ratio L/W
1	4.13	2.86	14.44	2.86	2.22	12.86	3.18	2.54	12.50
2	3.49	2.54	13.75	2.54	2.54	10.00	3.18	2.54	12.50
3	3.49	3.18	11.00	2.86	2.22	12.86	2.54	1.91	13.33
4	4.13	3.18	13.00	3.18	2.54	12.50	2.86	2.54	11.25
5	4.13	3.49	11.82	2.86	2.54	11.25	3.18	2.54	12.50
6	3.49	3.18	11.00	2.86	2.54	11.25	2.54	2.54	10.00
7	3.81	2.86	13.33	3.18	2.54	12.50	2.86	2.54	11.25
8	3.49	3.18	11.00	3.18	2.54	12.50	3.18	2.22	14.29
9	3.18	3.18	10.00	3.81	2.86	13.33	2.54	2.22	11.43
10	3.18	3.18	10.00	3.18	2.54	12.50	2.54	2.86	8.89
11	3.49	2.86	12.22	2.86	2.86	10.00	2.54	2.54	10.00
12	4.13	3.18	13.00	3.18	2.54	12.50	2.86	2.22	12.86
13	5.08	3.81	13.33	3.18	2.54	12.50	2.86	2.54	11.25
14	3.18	2.54	12.50	3.49	2.54	13.75	2.54	2.22	11.43
15	3.49	2.86	12.22	2.86	2.22	12.86	2.86	2.22	12.86
16	4.13	3.49	11.82	3.18	2.54	12.50	2.54	2.22	11.43
17	4.13	3.18	13.00	2.54	2.22	11.43	2.54	2.22	11.43
18	3.81	2.86	13.33	2.86	2.54	11.25	2.22	1.91	11.67
19	4.76	3.49	13.64	2.86	2.22	12.86	2.54	2.22	11.43
20	4.13	3.18	13.00	2.54	2.54	10.00	2.86	2.22	12.86
Mean	3.84	3.11	12.37	3.00	2.49	12.06	2.75	2.35	11.76
Variance	0.26	0.10	1.56	0.10	0.03	1.24	0.08	0.06	1.57

Exhibit C - 'Bergam's Green'Quantitative data 'core diameter' - Yuma

Location Y1: Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 1)

Wet date: 10/04/2004 Harvest date: 12/09/2004

Location Y2: Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 2)

Wet date: 10/04/2004 Harvest date: 12/09/2004

Plant	Core Diameter (cm)			
	Y1		Y2	
	Bergams Green	North Star	BergamsGreen	North Star
1	2.80	2.50	3.20	1.90
2	2.50	2.55	2.80	1.80
3	2.80	2.60	3.40	2.40
4	2.45	2.10	3.00	2.30
5	2.60	2.35	3.20	2.95
6	2.90	2.30	2.90	2.40
7	2.70	2.55	3.30	2.30
8	2.70	2.15	2.80	2.20
9	2.60	2.45	3.00	2.80
10	2.60	2.40	3.10	2.60
Mean	2.67	2.40	3.07	2.37

## Anova: Two-Factor With Replication

SUMMARY	Bergams Green	North Star	Total
Y1			
Count	10	10	20
Sum	26.65	23.95	50.6
Average	2.665	2.395	2.53
Variance	0.020027778	0.029138889	0.042473684

Y2			
Count	10	10	20
Sum	30.7	23.65	54.35
Average	3.07	2.365	2.7175
Variance	0.042333333	0.128916667	0.211914474

Total			
Count	20	20	
Sum	57.35	47.6	
Average	2.8675	2.38	
Variance	0.072703947	0.075105263	

## ANOVA

Source of Variat	SS	df	MS	F	P-value	F crit
Rep	0.3515625	1	0.3515625	6.379962193	0.016083281	4.113161367
Variety	2.3765625	1	2.3765625	43.12854442	1.22156E-07	4.113161367
Rep x Variet	0.4730625	1	0.4730625	8.584877127	0.005852238	4.113161367
Error	1.98375	36	0.055104167			
Total		5.1849375	39			

Exhibit C - 'Bergam's Green'Quantitative data 'core diameter' - Salinas

Location S3: Grower Bouttenet, Ranch #5, Boronda, Salinas, CA (rep1)

Wet date: 08/22/2004 Harvest date: 10/25/2004

Location S4: Grower Bouttenet, Ranch #3, Blanco, Salinas, CA (rep 2)

Wet date: 08/26/2004 Harvest date: 11/01/2004

Plant	core diameter (cm)			
	S3		S4	
	Bergams Green	North Star	BergamsGreen	North Star
1	2.95	2.15	3.00	2.15
2	2.60	2.30	2.60	2.65
3	2.45	2.35	2.50	2.60
4	2.65	2.10	2.60	2.40
5	2.70	2.10	2.45	2.65
6	2.90	2.05	2.60	2.25
7	2.75	2.15	2.55	2.30
8	2.65	2.10	2.20	2.60
9	2.80	2.15	2.60	2.40
10	2.55	2.40	2.70	2.40
Mean	2.70	2.19	2.58	2.44

Anova: Two-Factor With Replication

SUMMARY Bergams Green North Star Total

S3

Count	10	10	20
Sum	27	21.85	48.85
Average	2.7	2.185	2.4425
Variance	0.023888889	0.014472222	0.087967105

S4

Count	10	10	20
Sum	25.8	24.4	50.2
Average	2.58	2.44	2.51
Variance	0.040111111	0.031555556	0.039105263

Total

Count	20	20
Sum	52.8	46.25
Average	2.64	2.3125
Variance	0.034105263	0.038914474

## ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rep	0.0455625	1	0.0455625	1.656399899	0.206304145	4.113161367
Variety	1.0725625	1	1.0725625	38.99242616	3.28033E-07	4.113161367
Rep x Var	0.3515625	1	0.3515625	12.78086342	0.001020229	4.113161367
Error	0.99025	36	0.027506944			
Total	2.4599375	39				

# Exhibit C - Bergam's Green Quantitative data

Location Y1	:	Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 1)	Wet date: 10/04/2004	Harvest date: 12/09/2004
Location Y2	:	Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 2)	Wet date: 10/04/2004	Harvest date: 12/09/2004
Location S3	:	Grower Bouttenet, Ranch #5, Boronda, Salinas, CA	Wet date: 08/22/2004	Harvest date: 10/25/2004
Location S4	:	Grower Bouttenet, Ranch #3, Blanco, Salinas, CA	Wet date: 08/26/2004	Harvest date: 11/01/2004

Trial	Plant	spread of frame leaves (cm)				weight (grams)				core diameter (cm)				core height (cm)			
		Bergams Green	North Star	Two Star		Bergams Green	North Star	Two Star		Bergams Green	North Star	Two Star		Bergams Green	North Star	Two Star	
Y1	1	40.0	36.0	41.0	593	601	547			2.80	2.50	2.40		4.10	4.10		5.10
Y1	2	38.5	34.4	41.0	579	522	406			2.50	2.55	2.35		4.30	3.85		4.20
Y1	3	39.0	36.5	42.0	639	576	506			2.80	2.60	2.35		4.45	4.10		5.50
Y1	4	39.0	37.8	41.2	510	530	507			2.45	2.10	2.35		4.65	4.10		4.40
Y1	5	39.5	34.8	42.0	546	539	394			2.60	2.35	2.45		4.68	3.95		4.95
Y1	6	39.6	36.2	41.4	510	576	471			2.90	2.30	2.10		4.50	3.90		4.15
Y1	7	41.8	34.4	40.0	512	522	442			2.70	2.55	2.10		4.80	3.75		5.10
Y1	8	38.8	34.0	41.8	598	609	505			2.70	2.15	2.50		5.10	3.60		4.55
Y1	9	39.5	35.0	42.0	549	524	495			2.60	2.45	2.95		4.65	4.10		5.00
Y1	10	38.2	33.0	43.7	707	424	390			2.60	2.40	2.20		4.45	3.75		5.30
Y2	1	39.8	36.8	41.0	626	599	421			3.20	1.90	2.95		3.90	4.00		5.10
Y2	2	39.8	35.4	43.5	505	590	335			2.80	1.80	2.60		4.50	3.25		5.00
Y2	3	38.4	38.0	42.0	593	571	547			3.40	2.40	2.85		3.50	4.70		4.80
Y2	4	40.5	34.5	42.5	503	595	401			3.00	2.30	2.60		5.50	3.70		5.30
Y2	5	41.7	33.6	41.7	510	612	366			3.20	2.95	3.70		5.50	3.95		5.40
Y2	6	38.6	35.2	41.5	535	455	368			2.90	2.40	2.40		5.10	4.25		5.60
Y2	7	40.3	34.4	42.2	531	470	420			3.30	2.30	2.40		4.80	4.20		5.20
Y2	8	39.3	33.5	42.6	632	459	356			2.80	2.20	2.85		4.90	3.50		5.10
Y2	9	24.8	36.0	41.5	552	576	491			3.00	2.80	2.40		4.65	4.10		4.90
Y2	10	39.0	35.0	40.5	562	562	489			3.10	2.60	2.30		4.75	4.05		5.30
S3	1	42.0	33.2	41.2	576	612	377			2.95	2.15	2.45		5.90	4.50		5.20
S3	2	38.6	38.6	41.5	550	508	541			2.60	2.30	2.65		5.75	4.85		5.30
S3	3	39.2	36.0	41.0	511	460	449			2.45	2.35	2.35		5.60	4.25		5.20
S3	4	39.0	34.5	39.7	478	441	314			2.65	2.10	2.20		4.35	3.80		5.20
S3	5	39.3	35.4	38.5	392	575	435			2.70	2.10	2.35		5.90	5.15		4.45
S3	6	42.0	35.8	40.8	498	621	454			2.90	2.05	2.30		5.35	4.70		5.65
S3	7	39.3	35.3	42.0	444	525	406			2.75	2.15	2.25		6.10	5.30		4.95

Exhibit C - Bergam's Green  
Quantitative data (continued)

Trial	Plant	spread of frame leaves (cm)			weight (grams)			core diameter (cm)			core height (cm)		
		Bergams	Green	Star	Bergams	Green	Star	Bergams	Green	Star	Bergams	Green	Star
S3	8	38.7	36.0	39.5	451	389	583	2.65	2.10	2.25	5.50	4.75	5.10
S3	9	38.5	34.4	40.0	591	418	561	2.80	2.15	2.35	5.55	4.90	6.15
S3	10	38.2	36.0	43.5	432	476	519	2.55	2.40	2.40	4.55	5.35	5.90
S4	1	42.8	37.0	44.5	726	538	691	3.00	2.15	2.35	6.15	5.35	6.30
S4	2	41.7	35.8	43.2	578	386	738	2.60	2.65	2.50	6.20	4.00	6.80
S4	3	42.0	36.3	42.0	538	400	620	2.50	2.60	2.20	4.75	3.75	6.00
S4	4	41.5	36.5	43.2	640	474	557	2.60	2.40	2.40	6.65	4.10	5.40
S4	5	39.7	36.2	42.5	518	634	628	2.45	2.65	2.45	5.68	5.90	6.55
S4	6	41.5	35.6	42.0	664	455	644	2.60	2.25	2.60	6.20	4.95	6.75
S4	7	40.5	36.0	41.8	559	558	664	2.55	2.30	2.55	6.10	5.20	6.50
S4	8	39.0	37.4	43.8	555	643	713	2.20	2.60	2.50	5.80	5.65	6.60
S4	9	40.0	35.5	43.0	502	495	783	2.60	2.40	2.45	5.65	5.50	6.85
S4	10	39.0	36.2	43.7	449	420	705	2.70	2.40	2.35	5.30	4.85	6.25
Mean		39.5	35.6	41.8	546	453	579	2.75	2.35	2.47	5.15	4.39	5.43
Variance		7.26	1.63	1.67	4726	5708	6966	0.07	0.06	0.08	0.54	0.44	0.52

Exhibit C - 'Bergam's Green'Quantitative data 'spread of frame leaves' - Yuma

Location Y1: Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 1)

Wet date: 10/04/2004 Harvest date: 12/09/2004

Location Y2: Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 2)

Wet date: 10/04/2004 Harvest date: 12/09/2004

Plant	Spread of frame leaves (cm)			
	Y1		Y2	
	Bergams Green	North Star	BergamsGreen	North Star
1	40.0	36.0	39.8	36.8
2	38.5	34.4	39.8	35.4
3	39.0	36.5	38.4	38.0
4	39.0	37.8	40.5	34.5
5	39.5	34.8	41.7	33.6
6	39.6	36.2	38.6	35.2
7	41.8	34.4	40.3	34.4
8	38.8	34.0	39.3	33.5
9	39.5	35.0	24.8	36.0
10	38.2	33.0	39.0	35.0
Mean	39.4	35.2	38.2	35.2

Anova: Two-Factor With Replication

SUMMARY Bergams Green North Star Total

Y1

Count	10	10	20
Sum	393.9	352.1	746
Average	39.39	35.21	37.3
Variance	1.012111111	1.983222222	6.016842105

Y2

Count	10	10	20
Sum	382.2	352.4	734.6
Average	38.22	35.24	36.73
Variance	23.18622222	1.964888889	14.25063158

Total

Count	20	20
Sum	776.1	704.5
Average	38.805	35.225
Variance	11.82260526	1.870394737

## ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rep	3.249	1	3.249	0.461727947	0.501163599	4.113161367
Variety	128.164	1	128.164	18.21388137	0.000137015	4.113161367
Rep x Var	3.6	1	3.6	0.511609913	0.479056263	4.113161367
Error	253.318	36	7.036611111			
Total	388.331	39				

Exhibit C - 'Bergam's Green'Quantitative data 'spread of frame leaves' - Salinas

Location S3: Grower Bouttenet, Ranch #5, Boronda, Salinas, CA (rep1)

Wet date: 08/22/2004 Harvest date: 10/25/2004

Location S4: Grower Bouttenet, Ranch #3, Blanco, Salinas, CA (rep 2)

Wet date: 08/26/2004 Harvest date: 11/01/2004

spread of frame leaves (cm)				
Plant	S3		S4	
	Bergams Green	North Star	BergamsGreen	North Star
1	42.0	33.2	42.8	37.0
2	38.6	38.6	41.7	35.8
3	39.2	36.0	42.0	36.3
4	39.0	34.5	41.5	36.5
5	39.3	35.4	39.7	36.2
6	42.0	35.8	41.5	35.6
7	39.3	35.3	40.5	36.0
8	38.7	36.0	39.0	37.4
9	38.5	34.4	40.0	35.5
10	38.2	36.0	39.0	36.2
Mean	39.5	35.5	40.8	36.3

Anova: Two-Factor With Replication

SUMMARY Bergams Green North Star Total

S3

Count	10	10	20
Sum	394.8	355.2	750
Average	39.48	35.52	37.5
Variance	1.895111111	1.999555556	5.971578947

S4

Count	10	10	20
Sum	407.7	362.5	770.2
Average	40.77	36.25	38.51
Variance	1.737888889	0.356111111	6.368315789

Total

Count	20	20
Sum	802.5	717.7
Average	40.125	35.885
Variance	2.158815789	1.256078947

## ANOVA

Source of Varia.	SS	df	MS	F	P-value	F crit
Rep	10.201	1	10.201	6.81353668	0.013102132	4.113161367
Variety	179.776	1	179.776	120.0774797	5.10115E-13	4.113161367
Rep x Varie	0.784	1	0.784	0.523655794	0.473962595	4.113161367
Error	53.898	36	1.497166667			
Total	244.659	39				

Exhibit C - 'Bergam's Green'  
Quantitative data 'weight' - Yuma

Location Y1: Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 1)

Wet date: 10/04/2004 Harvest date: 12/09/2004

Location Y2: Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 2)

Wet date: 10/04/2004 Harvest date: 12/09/2004

Plant	weight (grams)			
	Y1		Y2	
	Bergams Green	North Star	BergamsGreen	North Star
1	601	547	599	421
2	522	406	590	335
3	576	506	571	547
4	530	507	595	401
5	539	394	612	366
6	576	471	455	368
7	522	442	470	420
8	609	505	459	356
9	524	495	576	491
10	424	390	562	489
Mean	542.3	466.3	548.9	419.4

Anova: Two-Factor With Replication

SUMMARY Bergams Green North Star Total

Y1

Count	10	10	20
Sum	5423	4663	10086
Average	542.3	466.3	504.3
Variance	2831.344444	3040.455556	4301.378947

Y2

Count	10	10	20
Sum	5489	4194	9683
Average	548.9	419.4	484.15
Variance	3869.433333	4803.377778	8521.397368

Total

Count	20	20
Sum	10912	8857
Average	545.6	442.85
Variance	3185.515789	4294.344737

ANOVA

Source of Variat	SS	df	MS	F	P-value	F crit
Rep	4060.225	1	4060.225	1.116626624	0.297685816	4.113161367
Variety	105575.625	1	105575.625	29.0349805	4.5653E-06	4.113161367
Rep x Variet	7155.625	1	7155.625	1.967910987	0.16923564	4.113161367
Error	130901.5	36	3636.152778			
Total	247692.975	39				

**Exhibit D - Bergam's Green**  
**Lettuce Dieback (tombusviruses) screening**

**Trial TB2-05**

Grower: Blanco Farms  
 Planted: July 30, 2005

Ranch: Pasco Ranch, Block #10  
 Evaluated: October 15, 2005

Area: Salinas, CA

Row No.	Variety	# disease	# healthy	total # plts
48528	North Star	31	2	33
48530	Bergam's Green	0	25	25
48531	Tropicana	18	2	20
48532	Two Star	0	26	26
48533	North Star	18	1	19
48534	Bergam's Green	0	35	35
48535	Tropicana	12	2	14
48536	North Star	17	0	17
48537	Two Star	0	29	29
48538	Bergam's Green	0	35	35
48539	Two Star	0	26	26

**Trial TB3-05**

Grower: Higashi Farms  
 Planted: August 1, 2005

Ranch: Home, Natividad  
 Evaluated: October 17, 2005

Area: Salinas, CA

Row No.	Variety	# disease	# healthy	total # plts
45608-1	North Star	36	0	36
48610-1	Bergam's Green	0	36	36
48611-1	Tropicana	19	2	21
48612-1	Two Star	0	40	40
48613-1	North Star	26	0	26
48614-1	Bergam's Green	0	59	59
48615-1	Tropicana	19	1	20
48616-1	North Star	25	0	25
48617-1	Two Star	0	57	57
48618-1	Bergam's Green	0	51	51
48619-1	Two Star	0	42	42
45608-2	North Star	33	3	36
48610-2	Bergam's Green	0	39	39
48611-2	Tropicana	36	1	37
48612-2	Two Star	0	46	46
48613-2	North Star	42	0	42
48614-2	Bergam's Green	0	44	44
48615-2	Tropicana	44	1	45
48616-2	North Star	38	0	38
48617-2	Two Star	0	37	37
48618-2	Bergam's Green	0	42	42
48619-2	Two Star	0	43	43

**Trial TB3-05 was conducted in same source field as publication below**

Reference: Grube, R.C., Wintermantel, W.M., Aburomia, R., Pink, D.A.C., Ryder, E.J., Genetic Analysis and mapping of resistance to lettuce dieback: a soilborne disease caused by tombusviruses, Theoretical Applied Genetics (2005) vol. 110, pp.259-268

**Lettuce- Lettuce Dieback (tombusviruses) Screenings**

200500262

**Trial: TB3-04**Grower: Blanco Farms  
Planted: June 30, 2004Ranch: Pasco, Block# 8  
Harvested: August 31, 2004

Salinas, CA.

Row No.	Variety	Susceptible	Resistant*	Total No. Plants
9283	Bergam's Green	0	46	46
9285	Tropicana	45	2	47
9289	Two Star	0	45	45
9290	North Star	46	0	46

Resistant\*= without symptoms

**Trial: TB4-04**Grower: Higashi Farms  
Planted: August 9, 2004Ranch: Home Ranch  
Harvested: October 29, 2004

Salinas, CA. (Natividad)

Row No.	Variety	Susceptible	Resistant*	Total No. Plants
10600	Bergam's Green	0	19	19
10601	Tropicana	29	1	30
10602	Tropicana	26	2	28
10593	Two Star	0	31	31
10594	North Star	27	0	27

**Trial: TB4-04 was conducted in same source field as publication below.**

Reference: Grube, R.C., Wintermantel, W.M., Aburomia, R., Pink, D.A.C., Ryder, E.J., Genetic Analysis and mapping of resistance to lettuce dieback: a soilborne disease caused by tombusviruses, Theoretical Applied Genetics (2005) vol. 110, pp.259-268.

**Corky Root *Sphingomonas (Rhizomonas) suberifaciens* Screening 2-01**

Planted: 3/14/2001      Evaluated: 4/3/2001

<u>Variety</u>	<u>Resistant</u>	<u>Susceptible</u>	<u>Total # Plants</u>
Tropicana, F-3	16	0	16
Bergam's Green, F-3	15	0	15
Two Star- Rep 1	0	15	15
Two Star- Rep 2	0	15	15
Two Star- Rep 3	0	15	15
North Star- Rep 1	16	0	16
North Star- Rep 2	16	0	16
North Star- Rep 3	16	0	16

**Corky Root *Sphingomonas (Rhizomonas) suberifaciens* Screening 3-03**

Planted: 4/09/2003      Evaluated: 4/28/2003

<u>Variety</u>	<u>Resistant</u>	<u>Susceptible</u>	<u>Total # Plants</u>
Bergam's Green, F-5	16	0	16
Two Star- Rep 1	0	13	13
Two Star- Rep 2	0	15	15
Two Star- Rep 3	0	16	16
North Star- Rep 1	5	0	5
North Star- Rep 2	8	0	8
North Star- Rep 3	7	0	7

**Corky Root *Sphingomonas (Rhizomonas) suberifaciens* Screening 1-04**

Planted: 10/06/2003      Evaluated: 10/30/2003

<u>Variety</u>	<u>Resistant</u>	<u>Susceptible</u>	<u>Total # Plants</u>
Tropicana, F-5*	16	0	16
Bergam's Green, F-5*	15	0	15
Two Star- Rep 1	0	15	15
Two Star- Rep 2	0	16	16
Two Star- Rep 3	0	10	10
North Star- Rep 1	18	0	18
North Star- Rep 2	7	0	7
North Star- Rep 3	5	0	5

**Corky Root *Sphingomonas (Rhizomonas) suberifaciens* Screening 2-04**

Planted: 5/07/2004      Evaluated: 6/02/2004

<u>Variety</u>	<u>Resistant</u>	<u>Susceptible</u>	<u>Total # Plants</u>
Tropicana, F-6**	21	0	21
Bergam's Green, F-6**	22	0	22
Two Star- Rep 1	0	15	15
Two Star- Rep 2	0	16	16
Two Star- Rep 3	0	12	12
North Star- Rep 1	16	0	16
North Star- Rep 2	13	0	13
North Star- Rep 3	16	0	16

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**Corky Root *Sphingomonas (Rhizomonas) suberifaciens* Screening 2-05**

**Planted: 4/07/2005**

**Evaluated: 5/07/2005**

<u>Variety</u>	<u>Resistant</u>	<u>Susceptible</u>	<u>Total # Plants</u>
Tropicana, F-6**	24	0	24
Tropicana, Production 2004	24	0	24
Tropicana, Production 2004	24	0	24
Tropicana, Production 2004	23	0	23
Tropicana, Production 2005	24	0	24
Bergam's Green, F-6**	17	0	17
Bergam's Green, Production 2004	23	0	23
Bergam's Green, Production 2004	18	0	18
Bergam's Green, Production 2004	22	0	22
Bergam's Green, Production 2005	19	0	19
Two Star- Rep 1	0	24	24
Two Star- Rep 2	0	7	7
Two Star- Rep 3	0	4	4
North Star- Rep 1	24	0	24
North Star- Rep 2	21	0	21
North Star- Rep 3	14	0	14

\* - Foundation seed used to produce stock seed and Trial Seed 2003

\*\* Stock Seed from 2003 used to produce commercial seed for sales 2004-5.

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Exhibit D - 'Bergam's Green'  
Scoring faciation seed stalk

Location S4 : 525 Lucy Brown Lane, San Juan Bautista, CA

Spring

Wet date: 03/16/2005

Trial	Plant	seed stalk faciation		
		Bergams Green	North Star	Two Star
S4	1	NF	F	NF
S4	2	NF	F	NF
S4	3	NF	F	NF
S4	4	NF	NF	NF
S4	5	NF	F	NF
S4	6	NF	F	NF
S4	7	NF	F	NF
S4	8	NF	NF	NF
S4	9	F	NF	NF
S4	10	NF	F	NF
S4	11	NF	F	NF
S4	12	NF	F	NF
S4	13	NF	NF	NF
S4	14	NF	F	NF
S4	15	NF	F	NF
S4	16	NF	F	NF
S4	17	NF	NF	NF
S4	18	NF	F	NF
S4	19	NF	F	NF
S4	20	NF	F	NF
Faciated		1	15	0
Non Faciated		19	5	20

Exhibit D - 'Bergam's Green'Scoring faciation seed stalk

Location S5 : 525 Lucy Brown Lane, San Juan Bautista, CA

Spring

Wet date: 03/16/2005

Location S6 : 525 Lucy Brown Lane, San Juan Bautista, CA

Spring

Wet date: 03/09//2005

Trial	Plant	seed stalk faciation		
		Bergam's Green	North Star	Two Star
S5	1	NF	F	NF
S5	2	NF	NF	NF
S5	3	NF	NF	NF
S5	4	NF	F	NF
S5	5	F	F	NF
S5	6	NF	NF	NF
S5	7	NF	NF	NF
S5	8	NF	F	NF
S5	9	F	F	NF
S5	10	NF	F	NF
S5	11	NF	NF	NF
S5	12	NF	NF	NF
S5	13	NF	F	NF
S5	14	NF	F	NF
S5	15	NF	NF	NF
S5	16	NF	F	NF
S5	17	NF	F	NF
S5	18	NF	F	NF
S5	19	NF	F	NF
S5	20	NF	F	NF
Faciated		2	13	0
Non Faciated		18	7	20
% Faciated		10%	65%	0%
S6	1	F	NF	NF
S6	2	NF	F	NF
S6	3	F	F	NF
S6	4	NF	F	NF
S6	5	NF	F	NF
S6	6	NF	F	NF
S6	7	F	F	-
S6	8	F	F	NF
S6	9	F	F	NF
S6	10	NF	NF	NF
S6	11	NF	F	NF
S6	12	NF	-	NF
Faciated		5	9	0
Non Faciated		7	2	11
% Faciated		42%	82%	0%

**Exhibit D - Bergam's Green**  
**Quantitative data**

Location Y1	:	Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 1)	Wet date: 10/04/2004	Harvest date: 12/09/2004
Location Y2	:	Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 2)	Wet date: 10/04/2004	Harvest date: 12/09/2004
Location S3	:	Grower Bouttenet, Ranch #5, Boronda, Salinas, CA	Wet date: 08/22/2004	Harvest date: 10/25/2004
Location S4	:	Grower Bouttenet, Ranch #3, Blanco, Salinas, CA	Wet date: 08/26/2004	Harvest date: 11/01/2004

Trial	Plant	plant height (cm)			length mature leaf (cm)			width mature leaf (cm)			# basal side shoots		
		Bergams Green	North Star	Two Star	Bergams Green	North Star	Two Star	Bergams Green	North Star	Two Star	Bergams Green	North Star	Two Star
Y1	1	22.8	18.0	25.3	21.3	17.7	24.0	22.9	22.3	23.9	2	0	0
Y1	2	21.0	17.5	24.2	20.3	21.5	24.1	24.4	23.6	26.9	0	0	0
Y1	3	24.8	18.3	27.0	20.1	18.5	24.1	25.3	23.0	25.2	1	1	0
Y1	4	22.8	18.7	26.5	22.4	17.2	24.8	24.6	19.6	21.6	0	0	0
Y1	5	22.0	19.0	25.8	24.0	16.6	25.6	24.6	20.8	24.5	0	0	0
Y1	6	24.6	19.2	27.7	25.1	18.5	26.4	21.8	19.6	24.2	1	1	0
Y1	7	23.5	18.0	27.7	23.0	18.3	24.5	23.2	21.1	25.1	1	0	0
Y1	8	24.8	20.3	24.0	21.3	17.7	21.8	25.0	18.6	22.9	0	1	0
Y1	9	23.5	19.5	27.2	20.9	18.1	24.4	24.3	18.4	24.8	0	1	0
Y1	10	22.8	16.3	27.5	23.8	17.2	25.6	23.0	21.3	26.5	1	2	0
Y2	1	22.5	19.2	22.0	22.9	19.5	24.6	23.9	22.1	26.3	0	1	1
Y2	2	23.0	19.0	24.8	21.7	18.2	24.2	22.1	20.5	21.3	0	0	1
Y2	3	20.5	19.8	27.2	21.4	18.9	25.3	23.1	22.1	26.3	0	0	1
Y2	4	23.7	20.0	26.8	23.8	18.6	25.4	24.0	21.4	27.3	1	0	0
Y2	5	21.7	19.8	26.8	21.6	19.5	24.9	25.3	21.2	26.4	0	0	0
Y2	6	23.8	19.0	26.2	17.7	16.2	23.2	22.7	20.2	26.8	0	0	0
Y2	7	24.4	18.5	28.0	24.0	18.2	23.0	24.4	20.4	25.5	0	5	0
Y2	8	23.0	19.4	28.5	21.3	17.9	24.7	23.8	22.0	26.0	0	2	2
Y2	9	23.6	19.6	26.2	24.4	18.4	24.3	23.3	21.8	25.3	0	1	1
Y2	10	40.4	20.0	24.2	23.1	19.4	24.9	26.1	22.7	27.0	0	1	0
S3	1	20.4	20.3	25.0	20.6	17.7	23.6	20.9	20.3	22.3	5	0	0
S3	2	18.8	20.1	24.6	20.8	18.4	25.4	20.6	22.1	24.2	6	1	0
S3	3	20.6	19.2	25.0	21.4	18.5	24.2	19.3	20.5	22.0	2	1	0
S3	4	20.0	17.8	23.5	23.5	17.3	23.8	20.3	19.1	21.8	1	0	0
S3	5	21.1	17.8	24.0	22.3	19.1	23.7	20.2	19.3	23.2	1	1	0
S3	6	22.8	17.8	24.3	21.4	19.2	25.3	21.4	22.0	21.7	7	3	0
S3	7	19.8	18.5	24.5	20.4	18.0	22.8	20.4	18.0	24.0	6	0	0

Exhibit D - Bergam's Green  
Quantitative data (continued)

Trial	Plant	plant height (cm)			length mature leaf (cm)			width mature leaf (cm)			# basal side shoots			
		Bergams Green	North Star	Two Star	Bergams Green	North Star	Two Star	Bergams Green	North Star	Two Star	Bergams Green	North Star	Two Star	
S3	8	19.6	18.0	23.0	21.6	18.2	20.6	20.9	20.1	20.9	4	0	0	
S3	9	20.3	19.2	25.5	21.7	17.4	22.5	22.2	18.6	22.8	4	1	0	
S3	10	21.0	20.0	26.2	21.7	17.8	26.0	21.9	20.3	23.0	2	4	0	
S4	1	22.2	19.7	25.0	21.4	19.5	23.7	23.5	25.3	26.1	7	4	1	
S4	2	24.0	19.0	25.8	20.8	18.2	26.2	24.5	22.1	28.7	1	4	2	
S4	3	21.7	17.3	26.8	22.9	19.8	23.3	23.9	22.5	26.3	3	2	2	
S4	4	23.5	19.5	24.8	20.8	18.7	23.3	23.5	23.6	25.6	5	0	1	
S4	5	24.0	20.0	29.0	21.8	18.8	25.0	25.8	20.9	24.4	3	7	0	
S4	6	23.0	18.8	26.0	22.5	18.7	25.1	24.4	22.3	24.6	1	6	0	
S4	7	24.8	20.8	25.3	21.9	19.8	26.9	23.5	22.6	25.5	4	7	0	
S4	8	21.3	18.0	27.7	22.1	16.8	25.2	22.5	20.4	25.3	1	6	1	
S4	9	23.2	20.2	30.4	22.3	19.9	26.7	22.9	22.1	27.9	4	4	3	
S4	10	21.0	18.0	30.7	17.8	17.2	24.6	22.8	19.7	25.8	4	2	3	
Mean		22.8	19.0	26.0	21.8	18.4	24.4	23.1	21.1	24.7	2.0	1.7	0.5	
Variance		10.72	1.00	3.53	2.38	1.07	1.68	2.79	2.54	3.82	4.82	4.51	0.72	

Exhibit D - 'Bergam's Green'Quantitative data 'plant height' - Yuma

Location Y1: Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 1)

Wet date: 10/04/2004 Harvest date: 12/09/2004

Location Y2: Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 2)

Wet date: 10/04/2004 Harvest date: 12/09/2004

Plant	plant height (cm)			
	Y1		Y2	
	Bergams Green	North Star	BergamsGreen	North Star
1	22.8	18.0	22.5	19.2
2	21.0	17.5	23.0	19.0
3	24.8	18.3	20.5	19.8
4	22.8	18.7	23.7	20.0
5	22.0	19.0	21.7	19.8
6	24.6	19.2	23.8	19.0
7	23.5	18.0	24.4	18.5
8	24.8	20.3	23.0	19.4
9	23.5	19.5	23.6	19.6
10	22.8	16.3	40.4	20.0
Mean	23.3	18.5	24.7	19.4

Anova: Two-Factor With Replication

SUMMARY Bergams Green North Star Total

Y1

Count	10	10	20
Sum	232.6	184.8	417.4
Average	23.26	18.48	20.87
Variance	1.553777778	1.266222222	7.348526316

Y2

Count	10	10	20
Sum	246.6	194.3	440.9
Average	24.66	19.43	22.045
Variance	31.87155556	0.249	22.41313158

Total

Count	20	20
Sum	479.2	379.1
Average	23.96	18.955
Variance	16.34884211	0.955236842

## ANOVA

Source of Variat	SS	df	MS	F	P-value	F crit
Rep	13.80625	1	13.80625	1.580541555	0.216778051	4.113161367
Variety	250.50025	1	250.50025	28.6773059	5.05733E-06	4.113161367
Rep x Variel	0.50625	1	0.50625	0.057955575	0.811122694	4.113161367
Error	314.465	36	8.735138889			
Total	579.27775	39				

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Exhibit D - 'Bergam's Green'  
Quantitative data 'plant height' - Salinas

Location S3: Grower Bouttenet, Ranch #5, Boronda, Salinas, CA (rep1)

Wet date: 08/22/2004 Harvest date: 10/25/2004

Location S4: Grower Bouttenet, Ranch #3, Blanco, Salinas, CA (rep 2)

Wet date: 08/26/2004 Harvest date: 11/01/2004

Plant	Plant Height (cm)			
	S3		S4	
	Bergams Green	North Star	BergamsGreen	North Star
1	20.4	20.3	22.2	19.7
2	18.8	20.1	24.0	19.0
3	20.6	19.2	21.7	17.3
4	20.0	17.8	23.5	19.5
5	21.1	17.8	24.0	20.0
6	22.8	17.8	23.0	18.8
7	19.8	18.5	24.8	20.8
8	19.6	18.0	21.3	18.0
9	20.3	19.2	23.2	20.2
10	21.0	20.0	21.0	18.0
Mean	20.4	18.9	22.9	19.1

Anova: Two-Factor With Replication

SUMMARY Bergams Green North Star Total

S3			
Count	10	10	20
Sum	204.4	188.7	393.1
Average	20.44	18.87	19.655
Variance	1.151555556	1.042333333	1.687868421

S4			
Count	10	10	20
Sum	228.7	191.3	420
Average	22.87	19.13	21
Variance	1.620111111	1.242333333	5.036842105

Total			
Count	20	20	
Sum	433.1	380	
Average	21.655	19	
Variance	2.866815789	1.1	

## ANOVA

Source of Varia:	SS	df	MS	F	P-value	F crit
Rep	18.09025	1	18.09025	14.31096315	0.000565019	4.113161367
Variety	70.49025	1	70.49025	55.76392643	8.07566E-09	4.113161367
Rep x Varie	11.77225	1	11.77225	9.312874942	0.004257533	4.113161367
Error	45.507	36	1.264083333			
Total	145.85975	39				

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**Exhibit D - 'Bergam's Green'**  
**Quantitative data leaf size - Yuma**

Location Y1: Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 1)

Wet date: 10/04/2004 Harvest date: 12/09/2004

Location Y2: Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 2)

Wet date: 10/04/2004 Harvest date: 12/09/2004

Plant	Length Mature Leaf (cm)			
	Y1		Y2	
	Bergams Green	North Star	BergamsGreen	North Star
1	21.3	17.7	22.9	19.5
2	20.3	21.5	21.7	18.2
3	20.1	18.5	21.4	18.9
4	22.4	17.2	23.8	18.6
5	24.0	16.6	21.6	19.5
6	25.1	18.5	17.7	16.2
7	23.0	18.3	24.0	18.2
8	21.3	17.7	21.3	17.9
9	20.9	18.1	24.4	18.4
10	23.8	17.2	23.1	19.4
Mean	22.2	18.1	22.2	18.5

Anova: Two-Factor With Replication

SUMMARY	Bergams Green	North Star	Total
Y1			
Count	10	10	20
Sum	222.2	181.3	403.5
Average	22.22	18.13	20.175
Variance	2.912888889	1.789	6.629342105

Y2			
Count	10	10	20
Sum	221.8	184.8	406.6
Average	22.18	18.48	20.33
Variance	3.806777778	0.979555556	5.869842105

Total			
Count	20	20	
Sum	444	366.1	
Average	22.2	18.305	
Variance	3.183421053	1.343657895	

**ANOVA**

Source of Variation	SS	df	MS	F	P-value	F crit
Rep	0.24025	1	0.24025	0.101283463	0.75213378	4.113161367
Var	151.71025	1	151.71025	63.95729208	1.6916E-09	4.113161367
Rep x Var	0.38025	1	0.38025	0.160304003	0.691242939	4.113161367
Error	85.394	36	2.372055556			
Total	237.72475	39				

Exhibit D - 'Bergam's Green'  
Quantitative data leaf size - Salinas

Location S3: Grower Bouttenet, Ranch #5, Boronda, Salinas, CA (rep1)

Wet date: 08/22/2004 Harvest date: 10/25/2004

Location S4: Grower Bouttenet, Ranch #3, Blanco, Salinas, CA (rep 2)

Wet date: 08/26/2004 Harvest date: 11/01/2004

Plant	length of mature leaf (cm)			
	S3		S4	
	Bergams Green	North Star	BergamsGreen	North Star
1	20.6	17.7	21.4	19.5
2	20.8	18.4	20.8	18.2
3	21.4	18.5	22.9	19.8
4	23.5	17.3	20.8	18.7
5	22.3	19.1	21.8	18.8
6	21.4	19.2	22.5	18.7
7	20.4	18.0	21.9	19.8
8	21.6	18.2	22.1	16.8
9	21.7	17.4	22.3	19.9
10	21.7	17.8	17.8	17.2
Mean	21.5	18.1	21.4	18.7

Anova: Two-Factor With Replication

SUMMARY Bergams Green North Star Total

S3			
Count	10	10	20
Sum	215.1	181.45	396.55
Average	21.51	18.145	19.8275
Variance	0.823777778	0.42525	3.571440789

S4			
Count	10	10	20
Sum	214	187.1	401.1
Average	21.4	18.71	20.055
Variance	2.135	1.199333333	3.483657895

Total			
Count	20	20	
Sum	429.1	368.55	
Average	21.455	18.4275	
Variance	1.404710526	0.853546053	

ANOVA

Source of Varia.	SS	df	MS	F	P-value	F crit
Rep	0.5175625	1	0.5175625	0.451688172	0.505825056	4.113161367
Variety	91.6575625	1	91.6575625	79.99156975	1.1226E-10	4.113161367
Rep x Var	1.1390625	1	1.1390625	0.994084884	0.325400848	4.113161367
Error	41.25025	36	1.145840278			
Total	134.5644375	39				

Exhibit D - 'Bergam's Green'  
Quantitative data leaf size - Yuma

Location Y1: Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 1)

Wet date: 10/04/2004 Harvest date: 12/09/2004

Location Y2: Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 2)

Wet date: 10/04/2004 Harvest date: 12/09/2004

Plant	Width Mature Leaf (cm)			
	Y1		Y2	
	Bergams Green	North Star	BergamsGreen	North Star
1	22.9	22.3	23.9	22.1
2	24.4	23.6	22.1	20.5
3	25.3	23.0	23.1	22.1
4	24.6	19.6	24.0	21.4
5	24.6	20.8	25.3	21.2
6	21.8	19.6	22.7	20.2
7	23.2	21.1	24.4	20.4
8	25.0	18.6	23.8	22.0
9	24.3	18.4	23.3	21.8
10	23.0	21.3	26.1	22.7
Mean	23.9	20.8	23.9	21.4

Anova: Two-Factor With Replication

SUMMARY	Bergams Green	North Star	Total
Y1			
Count	10	10	20
Sum	239.1	208.3	447.4
Average	23.91	20.83	22.37
Variance	1.252111111	3.193444444	4.602210526

Y2			
Count	10	10	20
Sum	238.7	214.4	453.1
Average	23.87	21.44	22.655
Variance	1.415666667	0.718222222	2.564710526

Total			
Count	20	20	
Sum	477.8	422.7	
Average	23.89	21.135	
Variance	1.264105263	1.950815789	

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rep	0.81225	1	0.81225	0.49381069	0.486751868	4.113161367
Variety	75.90025	1	75.90025	46.14386557	6.14576E-08	4.113161367
Rep x Var	1.05625	1	1.05625	0.642151482	0.428190449	4.113161367
Error	59.215	36	1.644861111			
Total	136.98375	39				

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Exhibit D - 'Bergam's Green'  
Quantitative data leaf size - Salinas

Location S3: Grower Bouttenet, Ranch #5, Boronda, Salinas, CA (rep1)

Wet date: 08/22/2004 Harvest date: 10/25/2004

Location S4: Grower Bouttenet, Ranch #3, Blanco, Salinas, CA (rep 2)

Wet date: 08/26/2004 Harvest date: 11/01/2004

Plant	width of mature leaf (cm)			
	S3		S4	
	Bergams Green	North Star	BergamsGreen	North Star
1	20.9	20.3	23.5	25.3
2	20.6	22.1	24.5	22.1
3	19.3	20.5	23.9	22.5
4	20.3	19.1	23.5	23.6
5	20.2	19.3	25.8	20.9
6	21.4	22.0	24.4	22.3
7	20.4	18.0	23.5	22.6
8	20.9	20.1	22.5	20.4
9	22.2	18.6	22.9	22.1
10	21.9	20.3	22.8	19.7
Mean	20.8	20.0	23.7	22.1

Anova: Two-Factor With Replication

SUMMARY Bergams Green North Star Total

S3			
Count	10	10	20
Sum	207.9	200	407.9
Average	20.79	20	20.395
Variance	0.73322222	1.789444444	1.359184211

S4			
Count	10	10	20
Sum	237.2	221.35	458.55
Average	23.72	22.135	22.9275
Variance	0.937888889	2.581694444	2.328282895

Total			
Count	20	20	
Sum	445.1	421.35	
Average	22.255	21.0675	
Variance	3.050763158	3.270072368	

ANOVA

Source of Varia.	SS	df	MS	F	P-value	F crit
Sample	64.1355625	1	64.1355625	42.45806612	1.42841E-07	4.113161367
Columns	14.1015625	1	14.1015625	9.335305557	0.004216471	4.113161367
Interaction	1.5800625	1	1.5800625	1.046009351	0.313251842	4.113161367
Within	54.38025	36	1.5105625			
Total	134.1974375	39				

Exhibit D - 'Bergam's Green'Quantitative data '# of suckers' - Yuma

Location Y1: Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 1)

Wet date: 10/04/2004 Harvest date: 12/09/2004

Location Y2: Grower Pasquinelli Produce, Block HW80 - Ave 24E, Dome Valley, Yuma, AZ (Rep 2)

Wet date: 10/04/2004 Harvest date: 12/09/2004

Plant	# of suckers (basal side shoots)			
	Y1		Y2	
	Bergams Green	North Star	BergamsGreen	North Star
1	2	0	0	1
2	0	0	0	0
3	1	1	0	0
4	0	0	1	0
5	0	0	0	0
6	1	1	0	0
7	1	0	0	5
8	0	1	0	2
9	0	1	0	1
10	1	2	0	1
Mean	0.60	0.60	0.10	1.00

Anova: Two-Factor With Replication

SUMMARY	Bergams Green	North Star	Total
Y1			
Count	10	10	20
Sum	6	6	12
Average	0.6	0.6	0.6
Variance	0.488888889	0.488888889	0.463157895

Y2			
Count	10	10	20
Sum	1	10	11
Average	0.1	1	0.55
Variance	0.1	2.444444444	1.418421053

Total			
Count	20	20	
Sum	7	16	
Average	0.35	0.8	
Variance	0.344736842	1.431578947	

## ANOVA

Source of Variat	SS	df	MS	F	P-value	F crit
Rep	0.025	1	0.025	0.028391167	0.867135599	4.113161367
Variety	2.025	1	2.025	2.299684543	0.138133077	4.113161367
Rep x Variet	2.025	1	2.025	2.299684543	0.138133077	4.113161367
Error	31.7	36	0.880555556			
Total	35.775	39				

Exhibit D - 'Bergam's Green'Quantitative data '# of suckers' - Salinas

Location S3: Grower Bouttenet, Ranch #5, Boronda, Salinas, CA (rep1)

Wet date: 08/22/2004 Harvest date: 10/25/2004

Location S4: Grower Bouttenet, Ranch #3, Blanco, Salinas, CA (rep 2)

Wet date: 08/26/2004 Harvest date: 11/01/2004

Plant	# of suckers (basal side shoots)			
	S3		S4	
	Bergams Green	North Star	BergamsGreen	North Star
1	5	0	7	4
2	6	1	1	4
3	2	1	3	2
4	1	0	5	0
5	1	1	3	7
6	7	3	1	6
7	6	0	4	7
8	4	0	1	6
9	4	1	4	4
10	2	4	4	2
Mean	3.80	1.10	3.30	4.20

## Anova: Two-Factor With Replication

## SUMMARY Bergams Green North Star Total

## S3

Count	10	10	20
Sum	38	11	49
Average	3.8	1.1	2.45
Variance	4.844444444	1.877777778	5.102631579

## S4

Count	10	10	20
Sum	33	42	75
Average	3.3	4.2	3.75
Variance	3.788888889	5.511111111	4.618421053

## Total

Count	20	20
Sum	71	53
Average	3.55	2.65
Variance	4.155263158	6.028947368

## ANOVA

Source of Varia	SS	df	MS	F	P-value	F crit
Rep	16.9	1	16.9	4.219140083	0.047286759	4.113161367
Variety	8.1	1	8.1	2.022191401	0.163622018	4.113161367
Rep x Var	32.4	1	32.4	8.088765603	0.007299388	4.113161367
Error	144.2	36	4.005555556			
Total	201.6	39				

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U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

**EXHIBIT E  
STATEMENT OF THE BASIS OF OWNERSHIP**

1. NAME OF APPLICANT(S) <b>ENZA ZADEN BEHEER B.V.</b>	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER <b>15. 2131</b>	3. VARIETY NAME <b>BERGAM'S GREEN</b>
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) <b>POSTBUS 7, 1600 AA ENKHUIZEN HALING 1<sup>st</sup>, 1602 DB ENKHUIZEN THE NETHERLANDS</b>	5. TELEPHONE (Include area code) <b>011-31-228-315844</b>	6. FAX (Include area code) <b>011-31-228-315854</b>
	7. PVPO NUMBER <b>200500262</b>	

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain.

☒ YES☐ NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country.

☐ YES☒ NO**THE NETHERLANDS**

10. Is the applicant the original owner?

☒ YES☐ NOIf no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES☐ NO

If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES☐ NO

If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

**PLEASE NOTE:**

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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